

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN

JOSEPH ROBERT MARCHESE, d/b/a JDS Digital Security Systems LLC, Plaintiff,	Case No. 12-cv-12276-NGE-MJH
v.	Hon. Nancy G. Edmunds Magistrate Judge Michael J. Hluchaniuk
MIILESTONE SYSTEMS, INC. , an Oregon corporation, and MILESTONE SYSTEMS A/S, a Danish Company, Defendants.	

**Special Master's Report and Recommendations
Regarding Claim Construction**

I. Introduction

1. The Court appointed the undersigned to make recommendations regarding resolution of patent claim construction issues. The Special Master heard oral argument at the Georgetown University Law Center in Washington, D.C., on July 25, 2013.
2. The patents involved in this case, U.S. Patent Nos. 6,891,566 and 8,185,964, relate to digital video systems including a computer connected via a network to video servers and cameras. The parties have agreed to the construction of the claims of the '964 patent. However, the parties contest the correct construction of several terms of the '566 patent.

II. Governing Legal Standards

3. The patent owner's right to exclude is established by the claims of the patent instrument. In *Markman v. Westlaw Instruments, Inc.*, 517 U.S. 370 (1996), the Supreme Court held that the construction of patent claims is a matter of law to be conducted by the court. The Court of Appeals for the Federal Circuit has built upon the foundation of *Markman* in subsequent case law. *See, e.g., Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). A brief review of the tenets of claim construction that are salient to this case appears appropriate.

4. The purpose of claim construction is to simplify the tasks of the trier of fact by addressing technical terminology that may appear in a claim and substituting wording that may be more readily understandable. *See Abbott Labs. v. Sandoz, Inc.*, 544 F.3d 1341, 1360 (Fed. Cir. 2008). However, not all terms within a patent's claims may require construction. The Federal Circuit has stressed that district courts are not required to construe claim terms with well-understood meanings, lest they be “inundated with requests to parse the meaning of every word in the asserted claims.” *O2 Micro Int'l Ltd. v. Beyond Innovation Technology Co.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008). If the proper interpretation of a term may be readily apparent to a lay person, then the court should simply apply its widely accepted meaning. *Phillips*, 415 F.3d at 1314; *see also Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010).
5. The words of a claim are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art when read in context of the specification and prosecution history. *Phillips*, 415 F.3d at 1313. The Federal Circuit has identified two exceptions to this general rule. First, a patentee may choose to define claim terms within the specification. If the patentee chooses to “act as his own lexicographer” by setting forth a definition of a disputed claim term other than its plain and ordinary meaning, then that definition controls. *Thorner v. Sony Computer Entertainment America LLC*, 669 F.3d 1362, 1365-66 (Fed. Cir. 2012).
6. Second, the patentee may disavow the full scope of a claim term. “Where the specification makes clear that the invention does not include a particular feature, that feature is deemed to be outside the reach of the claims of the patent, even though the language of the claims, read without reference to the specification, might be considered broad enough to encompass the feature in question.” *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1341 (Fed. Cir. 2001). In addition to the discussion of the invention within the specification, the patentee may disavow claim scope during its prosecution of the patent. *See Home Diagnostics, Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1358 (Fed. Cir. 2004) (“Absent a clear disavowal or contrary definition in the specification or the prosecution history, the patentee is entitled to the full scope of its claim language.”).
7. The doctrine of claim differentiation creates “a presumption that each claim in a patent has a different scope.” *Comark Communications, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998). However, “claim differentiation is a rule of thumb that does not trump the clear import of the specification.” *Edwards Lifesciences, LLC v. Cook Inc.*, 582 F.3d 1322, 1332 (Fed. Cir. 2009).
8. “While claim terms are understood in light of the specification, a claim construction must not import limitations from the specification into the claims.” *Douglas Dynamics LLC v. Buyers Products Co.*, 717 F.3d 1336, 1342 (Fed. Cir. 2013). The Federal Circuit has explained that “an

accused infringer cannot overcome the ‘heavy presumption’ that a claim term takes on its ordinary meaning simply by pointing to the preferred embodiment or other structures or steps disclosed in the specification or prosecution history.” *Teleflex, Inc. v. Ficosa North America Corp.*, 299 F.3d 1313, 1327 (Fed. Cir. 2002) (citation omitted). Further, a claim construction that excludes a preferred embodiment of the invention is unlikely to be correct. *See SynQor, Inc. v. Artesyn Technologies, Inc.*, 709 F.3d 1365, 1378-79 (Fed. Cir. 2013).

- With these basic principles in mind, this Report and Recommendation turns to the specific issues disputed by the parties. They involve the preamble of several claims of the `566 patent, as well as the terms “digital storage device,” “first marker identifying the start of the image,” “second marker identifying the end of the image,” index the file using the first and second marker,” and “periodic.” This Report and Recommendation addresses these issues in turn.

III. The Preamble

- The term “preamble” refers to the introductory words within a patent claim. In the claims of the `566 patent considered here, the preamble consists of the words that appear prior to the transition phrase “comprising”. The remainder of the claim’s text is termed the “body” of the claim in patent parlance.
- A persistent issue in claim construction is whether the preamble merely consists of a statement of the intended use of the invention, or whether the terms within the preamble constitute limitations upon the scope of the claims. Here the accused infringers, Milestone Systems, Inc. and Milestone Systems A/S (collectively “Milestone”), assert that the preambles of claims 1, 29, 31, 32, 45, and 47 of the `566 patent rise to the level of limitations and should be construed as if they occurred within the body of the claim. In contrast, the plaintiffs, Mr. Joseph Robert Marchese and JDS Digital Security Systems LLC (collectively “Marchese”), contend that the preambles of each of these claims simply recite the purpose or intended use of the invention and therefore do not qualify as claim limitations.
- Preambles describing the intended purpose of an invention ordinarily do not limit the claims because the patentability and infringement of a product claim depends upon the product’s claimed structure, not its actual use. For example, a claim directed toward a “football helmet” comprising a hard plastic shell, internal padding, face mask, and chinstrap would be infringed even if the wearer of such a helmet happened to be playing hockey or riding a horse. *See Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997) (“where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention, the preamble is not a claim limitation.”).

13. However, the courts have long held that a preamble constitutes a limitation upon the scope of a claim if it gives “life, meaning and vitality” to the claim. *Kropa v. Robie*, 187 F.2d 150, 152 (Cust. & Pat. Appl. 1951). Regrettably this well-worn phrase may not suitably direct pointed inquiries into the matter. In *Catalina Marketing Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002), the Federal Circuit identified a number of more specific standards to determine whether the preamble constitutes a limitation upon the scope of the claims. First, does the body of the claim evidence “dependence on a particular disputed preamble phrase for antecedent basis”? Second, is the preamble “essential to understand limitations or terms in the claim body”? Third, does the preamble recite “additional structure or steps underscored as important by the specification”? Finally, was there “clear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art”? However, the Federal Circuit ultimately conceded that “[n]o litmus test defines when a preamble limits claim scope.” *Id.*

14. The first two *Catalina Marketing* factors are most suitably invoked in this case. The first factor relates to the principle of antecedent basis. “The requirement of antecedent basis is a rule of patent drafting, administered during patent examination.” *Energizer Holdings, Inc. v. International Trade Comm'n*, 435 F.3d 1366, 1370 (Fed. Cir. 2006). In brief, patent claims employ the indefinite article “a” when they first recite a claim element. They then may use the definite articles “the” or “said” anaphorically, referencing the initial, antecedent term or phrase. *See Baldwin Graphic Systems, Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1343 (Fed. Cir. 2008). If the body of the claim employs a definite article in connection with a recited claim component that was previously introduced with an indefinite article in the claim preamble, then the language of the preamble may constitute a limitation. To similar effect, invoking the second *Catalina Marketing* factor, the preamble may be essential to understanding terms introduced with the body of the claim.

15. A representative Federal Circuit opinion on point is *C.W. Zumbiel Co. v. Kappos*, 702 F.3d 1371 (Fed. Cir. 2012). There the preamble of a patent claim recited “a plurality of containers.” *Id.* at 1385. The body of the claim then spoke to “the containers” and “said container.” The U.S. Patent and Trademark Office concluded that the preamble should qualify as a limitation upon the scope of the claim under these circumstances, and on appeal the Federal Circuit affirmed. The Court of Appeals reasoned that “‘containers’ as recited in the claim body depend on ‘a plurality of containers’ in the preamble as an antecedent basis. Therefore, these terms recited in the preamble are limitations” *Id.*

A. Claims 1, 29, and 31

16. Turning to the individual claims of the '566 patent, claims 1, 29, and 31 of the '566 patent incorporate similar preambles and are therefore are considered together. They recite, with emphasis added:

Claim 1. A computer readable medium for use by *a computer* in providing an interface to *multiple cameras* via *one or more video servers* accessible to the computer via *a network*, comprising:

a digital storage device;

a user interface program stored on said digital storage device in computer readable form, said program being operable upon execution by *the computer* to access server data uniquely identifying *each video server* and to attempt access to the video servers over *the network*, said program also being operable to obtain from each of the accessible video servers a hardware address stored in the video server;

wherein said program is further operable to validate the hardware addresses received from the video servers using the server data and, for those video servers having valid hardware address, said program is operable to generate a user interface display on the computer that includes a display window for each of *the cameras* accessed via the validated servers over the network and to display in each of the display windows an image received from the camera associated with that display window.

Claim 29. A computer readable medium for use by *a computer* in providing an interface to *multiple cameras* accessible to the computer via *a network*, comprising:

a digital storage device;

a user interface program stored on said digital storage device in computer readable form, said program being operable upon execution by *the computer* to access camera data uniquely identifying *the cameras* and to attempt access to the cameras over *the network* using the camera data;

wherein said program is further operable to verify access to those ones of the cameras that are accessible over the network and to generate a user interface display on the computer that includes a display window for each of the cameras accessed over the network and to display in each of the display windows an image received from the camera associated with that display window; and

wherein said program is operable to monitor the network for a trigger event generated by one of the cameras.

Claim 31. A computer readable medium for use by *a computer* in providing an interface to *multiple cameras* accessible to the computer via *a network*, comprising:

a digital storage device;

a user interface program stored on said digital storage device in computer readable form, said program being operable upon execution by *the computer* to access camera data uniquely identifying *the cameras* and to attempt access to the cameras over *the network* using the camera data;

wherein said program is further operable to verify access to those ones of the cameras that are accessible over the network and to generate a user interface display on the computer that includes a display window for each of the cameras accessed over the network and to display in each of the display windows an image received from the camera associated with that display window; and

wherein said program is operable in response to user selection of a display window to display a form that permits the user to initiate recording of images from the camera associated with that display window.

17. Several elements of each of these claims rely upon the preamble for antecedent basis. In particular, the body of claim 1 recites “the computer”, “each video server”, “the network”, and “the cameras”; the drafter of the claim introduced each of these terms within the preamble of claim 1. The same analysis holds for claims 29 and 31 with respect to “the computer”, “the cameras”, and “the network”. As a result, Federal Circuit precedent compels the conclusion that the words of the preamble constitute limitations upon the scope of these claims.

B. Claims 32 and 45

18. Claims 32 and 45 of the `566 patent incorporate identical preambles and are therefore considered together. These claims recite, with emphasis added:

Claim 32. A computer readable medium for use by *a computer* in detecting motion in *a sequence of color video images* received by the computer, comprising:

a digital storage device;

a program stored on said digital storage device in computer readable form, said program being operable upon execution by *the computer* to select *one of the video images* as a reference image and another of the video images as a selected image to be compared to the reference image;

wherein said program is operable to access a plurality of different color component values for each of a number of pixels from the reference image and for each of a number of corresponding pixels from the selected image, with said program being operable to perform pixel comparisons using the color component values and to maintain a count of the number of pixels for which the difference in color component values for corresponding pixels from the reference and selected images differ by more than the preselected amount;

wherein said program is operable to maintain a separate counter for each of the different color component values and to increment the counter associated with a particular color component value if that color component value for a pixel from the selected image differs from that same color component value for the corresponding pixel from the reference image by more than a preselected offset associated with that color component; and

wherein said program is operable to generate a motion detect signal based on the counts stored in the counters.

Claim 45. A computer readable medium for use by *a computer* in detecting motion in *a sequence of color video images* received by the computer, comprising:

a digital storage device;

a program stored on said digital storage device in computer readable form, said program being operable upon execution by *the computer* to select *one of the video images* as a reference image and another of the video images as a selected image to be compared to the reference image;

wherein said program is operable to access a color component value for each of a number of pixels from the reference image and for each of a number of corresponding pixels from the selected image, with said program being operable to perform pixel comparisons using the color component values and to generate a motion detect signal when the difference in color component values for corresponding pixels from the reference and selected images differ by more than a preselected amount;

wherein said program is operable during comparison of the selected and reference images to maintain a count of the number of pixels for which the difference in color component values for corresponding pixels from the reference and selected images differ by more than the preselected amount;

wherein each pixel has a plurality of different color component values associated therewith and wherein said program is operable to maintain a separate counter for each of the different color component values and to increment the counter associated with a particular color component value if that color component value for a pixel from the selected image differs from that same color component value for the corresponding pixel from the reference image by more than a preselected offset associated with that color component;

wherein said program is operable to generate the motion detect signal when, for each of the counters, the count stored in that counter exceeds a predetermined minimum count associated with the color component value associated with that counter; and

wherein the different color component values comprise RGB component values, each of which has its own offset and minimum count.

19. Once again, several elements of claims 32 and 45 rely upon the preamble for antecedent basis. In particular, the body of both claims recites “the computer” and “one of the video images”, terms that were first introduced in the preamble. Governing case law therefore requires that the words of the preamble constitute limitations upon the scope of these claims.

C. Claim 47

20. Claim 47 of the `566 patent recites, with emphasis added:

47. A computer readable medium for use by a computer in recording *a sequence of images*, each of which comprises an individual image file in which the image is represented in a graphics file format that includes *a first marker* identifying the start of the image and *a second marker* identifying the end of the image, comprising:

a digital storage device;

a program stored on said digital storage device in computer readable form, said program being operable to store *the images* together as a single file that comprises the images concatenated together in sequential order;

wherein said program is further operable to index the file using *the first and second marker*;

wherein said single file comprises a digital video file and said program is operable to store a plurality of digital video files on the data storage device; and

wherein said program is operable to automatically index the digital video files on a periodic basis.

21. As with the other claims considered here, several elements of claim 47 rely upon the preamble for antecedent basis: “a sequence of images”, “first marker”, and “second marker”. The drafter of the claim introduced each of these terms within claim 47’s preamble. As a result, Federal Circuit precedent indicates that the words of the preamble constitute limitations upon the scope of these claims.
22. I therefore recommend that the preamble qualify as a limitation upon the scope of claims 1, 29, 31, 32, 45, and 47 of the `566 patent.

IV. “Digital Storage Device”

23. The term “digital storage device” appears in claims 1, 29, 31, 32, 45, and 47 of the `566 patent. Construction of this term is straightforward. The `566 patent explains:

As used in the specification and claims, the term “digital storage device” includes any of a variety of different digital storage devices, including magnetic media such a hard disk or removable disk, optical storage media such as CDROM or DVD, or magneto-optical media.

‘566 Patent, Col. 5, lines 45-50.

24. As noted previously, a patent proprietor is entitled to “act as his own lexicographer” by clearly expressing an intent to define a term. *See, e.g., 3M Innovative Properties Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1369-71 (Fed. Cir. 2004) (patentee held to have acted as his own lexicographer when specification stated: “‘Multiple embossed’ means two or more embossing patterns are superimposed on the web to create a complex pattern of different depths of embossing.”). The language of the `566 patent plainly expresses the drafter’s intent to define the term “digital storage device.” As a result, the construction articulated within the patent’s specification should be adopted.
25. Milestone instead asserts that the term “digital storage device” should be construed as “a data storage device from which the user interface program is launched and executed by the computer.” The Special Master declines to adopt this construction. Put simply, the `566 patent does not inevitably require that the user interface program be launched and executed from the data storage device. Notably, each of the contested claims expressly calls for a “user interface program stored on said digital storage device” In other words, the claims themselves call for “storage” of the program—not “launch and execution” as JDS assets. *See, e.g., Phillips*, 415

F.3d at 1314 (other words in the claim provide guidance to the meaning of contested claim terms).

26. Although Milestone correctly observes that in some of the embodiments of the invention discussed in the specification of the '566 patent, the user interface program that will be launched and executed has been stored in the claimed digital storage device. However, in view of the more expansive definition of the term "digital storage device" explicitly offered in the specification, inserting this additional language into the claim would impose limitations that the drafter did not intend. *See, e.g., Douglas Dynamics, LLC v. Buyers Products Co.*, 717 F.3d 1336, 1342 (Fed. Cir. 2013) ("While claim terms are understood in light of the specification, a claim construction must not import limitations from the specification into the claims.").
27. I therefore recommend that the term "digital storage device," appearing in claims 1, 29, 31, 32, 45, and 47 of the '566 patent, should be defined as "any of a variety of different digital storage devices, including magnetic media such a hard disk or removable disk, optical storage media such as CDROM or DVD, or magneto-optical media."

V. "A First Marker Identifying the Start of the Image" and "A Second Marker Identifying the End of the Image"

28. The preamble of claim 47 of the '566 patent calls for "an individual image file in which the image is represented in a graphics file format that includes a first marker identifying the start of the image and a second marker identifying the end of the image" Plaintiff-patentee Marchese proposes that the term "first marker" be construed as "the data identifying the start of an image" and that the term "second marker" be construed as "the data identifying the end of an image." The accused infringer, Milestone, instead asserts that "first marker" be construed as "data specified by the graphics file format identifying the start of an image" and that "second marker" be construed as "data specified by the graphics file format identifying the end of an image."
29. The distinction between the two competing constructions lies in whether the start and end of the pertinent data must be stipulated by a graphics file format, such as JPEG or TIFF/EP; or whether these points could be specified otherwise. In support of its construction requiring that the first and second markers must be identified by the graphics file format, Milestone points to the following language from the specification of the '566 patent:

In accordance with yet another aspect of the invention, there is provided a computer readable medium and method for use by a computer in recording a sequence of images, each of which comprises an individual image file in which the image is represented in a graphics file format that includes a first marker identifying the start of the image and a second marker identifying the end of the image.

`566 patent, col. 3, line 65-col. 4, line 4. Milestone further observes that the specification of the `566 patent discloses the use of “standard” SOI (start-of-image) and EOI (end-of-image) makers in keeping with the JPEG standard. *Id.*, col. 10, lines 3-6.

30. Although Milestone’s observations are correct so far as they go, the Federal Circuit has repeatedly “cautioned against limiting the claimed invention to preferred embodiments or specific examples in the specification.” *Texas Instruments, Inc. v. U.S. Int’l Trade Comm’n*, 805 F.2d 1558, 1563 (Fed. Cir. 1986). Indeed, the Court of Appeals has “expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment.” *Phillips*, 415 F.3d at 1323. In particular, a “construing court’s reliance on the specification must not go so far as to import limitations into claims from examples or embodiments appearing only in a patent’s written description unless the specification makes clear that the patentee intends for the claims and the embodiments in the specification to be strictly coextensive.” *Silicon Graphics, Inc. v. ATI Techs., Inc.*, 607 F.3d 784, 792 (Fed.Cir.2010) (citations omitted).
31. Viewed under this standard, nothing in the `566 patent or its prosecution history indicates that the first and second markers must necessarily be specified by the graphics file format. Nowhere does the `566 patent, or its prosecution history, clearly indicate the patentee’s intention to narrow these limitations of claim 47 to match the examples provided with the specification. As a result, the broader language of claim 47 controls. *See Falana v. Kent State University*, 669 F.3d 1349, 1355 (Fed. Cir. 2012) (absent a clear statement in the patent or prosecution history that the claims are more limited than their own words indicate, the plain language of the claims determines their scope).
32. I therefore recommend that the term “first marker” be construed as “the data identifying the start of an image” and that the term “second marker” be construed as “the data identifying the end of an image.”

VI. “Index the File Using the First and Second Marker”

33. Claim 47 of the `566 patent provides that “said program is further operable to index the file using the first and second marker.” Plaintiff-patentee Marchese asserts that this phrase be construed as “create a list using the first and second markers that points to locations in the single file.” In contrast, accused infringer Milestone contends that it be construed to mean “create a list using the first and second markers that points to locations of the first and second markers in the single file.”
34. The dueling constructions of the parties differ based upon their specificity of the contents of the index. Under Marchese’s view of the claims, the claim merely requires the use of the first and

second markers during the indexing of the file; the claim does not further stipulate the contents of the index itself. Milestone's construction requires that the index consist of the first and second markers themselves. In support of its construction, Milestone observes that the specification of the '566 patent explains that "the image viewer program 52 creates an index of the SOI and EOI markers of each image in the jpx file." '566 patent, col. 16, lines 53-55.

35. Once more, nothing in the '566 patent indicates that the broader language of claim 47 should be narrowed to a scope that is coextensive with the preferred embodiment described in the specification. Indeed, claim 47 does not even use the term "index" as a noun. As a result, restricting the scope of claim 47 to one possible structure of the resulting index seems particularly inappropriate.
36. I therefore conclude that the term "index the file using the first and second marker" be construed as "create a list using the first and second markers that point to locations in the single file."

VII. "Periodic"

37. Claim 47 of the '566 patent provides that "said program is operable to automatically index the digital video files on a periodic basis." In what might make a fine question for a law school final examination, disagreement has arisen over the meaning of the term "periodic." Marchese proposes the construction "occurring repeatedly at regular intervals or from time to time." In contrast, Milestone asserts that the term "periodic" should mean "occurring or recurring at regular spaced-apart intervals."
38. In support of its construction, Milestone cites the statement of the specification of the '566 patent that the "program 52 can also include an autoindex feature which, when enabled, automatically indexes the archived jpx files every hour to build an index" '566 patent, col. 16, lines 30-32. Milestone also points to the distinct wording of the final limitations of claims 47 and 48. In juxtaposition, these limitations read:

Claim 47. ". . . wherein said program is operable to automatically index the digital video files on a periodic basis."

Claim 48. ". . . wherein said program is operable upon user selection of the single file to search for the index and, if not found, is further operable to create the index."

In the view of Milestone, these different phrasings suggest that the term "periodic" in claim 47 temporally limits the claim to activity at regular intervals.

39. Although these arguments have some persuasive force, ultimately the plaintiff's construction is more appropriate. First, the ordinary usage of the term "periodic" may indeed suggest an event that may take place on strict, regular basis; but it also describes an event that occurs within a recurring but irregular timeframe. Second, the specification of the '566 patent explains that indexing may be performed automatically when a file is loaded. '566 patent, col. 16, lines 35-36. Because files may be loaded from time to time, so too may the index be generated automatically from time to time. *See North American Container, Inc. v. Plastipak Packaging, Inc.*, 415 F.3d 1335, 1345 (Fed. Cir. 2005) (observing that claim constructions that do not read on preferred embodiments disclosed in the specification are rarely, if ever, correct). Finally, claims 47 and 48 differ in other respects. As a result, the principle of claim differentiation does not compel distinct constructions for the final limitations of those two claims. *See Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1370 (Fed. Cir. 2007) (declining to apply the doctrine of claim differentiation where claims "are not otherwise identical"); *Seachange Int'l, Inc. v. C-COR, Inc.*, 413 F.3d 1361, 1369 (Fed. Cir. 2005) (claim differentiation is "not a hard and fast rule and will be overcome by a contrary construction dictated by the written description or prosecution history").

40. I therefore recommend that the phrase "periodic" within claim 47 be construed as "occurring repeatedly at regular intervals or from time to time."

VIII. Summary of Recommendations

41. For the convenience of the court and the litigants, the following chart summarizes the recommended claim constructions.

Relevant Claims of the `566 Patent	Term Construed	Recommended Construction
1, 29, 31, 32, 45, and 47	Preamble	The preamble should be construed as a limitation upon the scope of the claims.
1, 29, 31, 32, 45, and 47	“digital storage device”	“Any of a variety of different digital storage devices, including magnetic media such as a hard disk or removable disk, optical storage media such as CDROM or DVD, or magneto-optical media.”
47	“a first marker identifying the start of the image”	“The data identifying the start of an image.”
47	“a second marker identifying the end of the image”	“The data identifying the end of an image.”
47	“index the file using the first and second marker”	“Create a list using the first and second markers that point to locations in the single file.”
47	“periodic”	“Occurring repeatedly at regular intervals or from time to time.”

s/ John R. Thomas
Special Master

August 13, 2013
Date

John R. Thomas
Georgetown University Law Center
600 New Jersey Avenue, NW
Washington, DC 20001
Telephone: (202) 662-9009
Email: jrt6@law.georgetown.edu